UTAH DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS CENTER
MONTHLY REPORT NOVEMBER 2003

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Field Devices Summary

Freeway Closed Circuit Television (CCTV)	163
Surface Street CCTV	32
Dial-up CCTV	35
Total CCTV	**230**
Freeway VMS	42
Surface Street VMS	17
Portable VMS	2
Total VMS	**62**
HAR (6 deployed, 5 portable units)	11
TMS	231
RWIS	41
Connected Traffic Signals	623
Connected Ramp Meters	23

Operations Summary

VMS Messages Displayed	188
Signal Timing Calls	28
Signal Maintenance Calls	229
New Work Orders	338
Incident Responses	667
Website Visitor Sessions	154,234
511 Calls	51,902
Email Alerts Sent	240
CommuterLink Questions	28

TOC Employee of the Month

Dave Kinnecom—Traffic Management Engineer

Engineering Conference Awards Ceremony
Deryl Mayhew, John Njord, Guy Buckner, Troy Noall and Carlos Braceras

KUDOS!

Dear Denny:

I want to thank you for your efforts to improve Utah's AMBER Alert Plan…Your dedication has helped make Utah's AMBER Alert Plan one of the best in the nation and has made this state a safer place for children.

–Attorney General Mark L. Shurtleff

TOC Mission

1. To Support UDOT and the Department of Public Safety in Improving Highway Safety.
2. To Help Provide Reliable and Efficient Travel.
3. To Provide Useful and Timely Real-time Traffic Information.
4. To Work Together with Other Government Agencies to Serve the Public.
5. To Provide Excellent Customer Service.

ACTIVITY HIGHLIGHTS

TOC Activities

This Month

1. The calls to the 511 System reached an all time high of 51,902 in the month of November. This surpassed even the number of calls made during the Olympics. High call volumes for the month are attributed to the winter driving conditions. The high volumes and port usage on Nov 26 are attributed to a morning snowstorm, travel on the day before Thanksgiving, and a radio call-in show discussing UDOT winter road maintenance and mention of 511 phone number. With static roadway signs and radio announcements, motorists know how they can receive the most up-to-date weather information.
2. The Traffic Signal Systems Crew created and implemented special holiday timing plans to be run in the area around Fashion Place Mall. The group began to run these plans the day after Thanksgiving, and will run through the New Year.
3. The TOC participated in the inauguration of Governor Olene Walker. IMT personnel helped to control the heavy movement of traffic to and from the State Capital. Region 2 Traffic Engineers developed a shuttle or Park and Ride system from the Delta Center to the Capital. Traffic Signal Timing Engineers also implemented special timing plans in the downtown area to help alleviate congestion.
4. The annual Utah Department of Transportation Engineering Conference was held from November 12-14 at the South Towne Exposition Center. The Region 2 UDOT Traffic Signals Crew; Deryl Mayhew, Guy Buckner, Troy Noall, Ron Bray, Matt Smith and Larry Johnson, received an award for Signals and ITS. For work performed on changing out bulbs with LED and annual preventative maintenance.
5. Dave Kinnecom has been appointed as the new Traffic Management Engineer. Dave has been leading the Traffic Operations Center since it opened and now leads the combined TOC and ITS (Intelligent Transportation Systems) Divisions now called the Traffic Management Division.

Presentation of UDOT Career Achievement Award to Jim Anderson by John Njord and Carlos Braceras

6. The Managers of the TOC attended a Management Training Course. Carla Freebairn from UDOT Human Resources provided instruction in the morning covering Personal Development Plans. Ron Vandermyde, from the Utah Society of Certified Public Managers, provided the afternoon instruction on Customer Service.

ATMS Improvement and Expansion Activities

The following is a list of many of the projects that have either been completed, or are currently underway:

Region 1:

- Items which will be impacted by the US-89 Interchange Improvements Project have been identified. This project entails widening of ramps and modification of the Ramp Meter on Beck Street. This project will also relocate the current location of the mainline I-15 fiber backbone.

Region 2:

- Diane Silcox of UDOT ISS performed a network upgrade that will facilitate the use of the new Video over Ethernet protocol that will be used in the next deployment stage. The network upgrade changed the current system to a multi-cast system, which enables the video to be transmitted to multiple locations, and only pulls a video feed when requested, thus remaining within bandwidth requirements. Diane also added a VPN (Virtual Private Network) Concentrator. This was done before with the firewall, but was given a dedicated VPN Concentrator to remove the load and provide better performance of the firewall. The firewall was upgraded to be able to host more networks. The upgrade went very smoothly, and prepares the TOC to be ready to move into the next stage of deployment.
- Cost estimates have been obtained from Utah Power and Light for the routing of power to the new VMS that will be install on I-80 near Lakepoint.
- CCTV have been installed on the Bangerter Signal and CCTV Inter-Connect Project. This project includes the installation of 10 CCTV as well as integration of traffic signals along Bangerter Highway. It will be the first project in Region 2 to use the new IP communication architecture.

Region 3:

- The VMS near the I-15 Alpine Exit has been installed. This sign was part of the Alpine Overlay and Expansion Project from the Point of the Mountain to Lehi. This project is in the final testing stages.
- Decisions have been made on the format of the lobby display at the Region 3 Complex. The display is part of the Region 3 Hub to TOC Inter-Connect Project.
- A concept report to provide a backbone inter-connect between the Region 3 ATMS Hub, Orem, Provo and Spanish Fork has been reviewed by all affected agencies and has been approved. A detailed design will now commence with final implementation scheduled for the end of next year. This design is intended initially to integrate local agencies in Utah County (Provo, Orem, American Fork, Spanish Fork and UTA) onto the CommuterLink network, and to convert existing devices onto the shared network.

VMS near Alpine Exit in Region 3

Region 4:

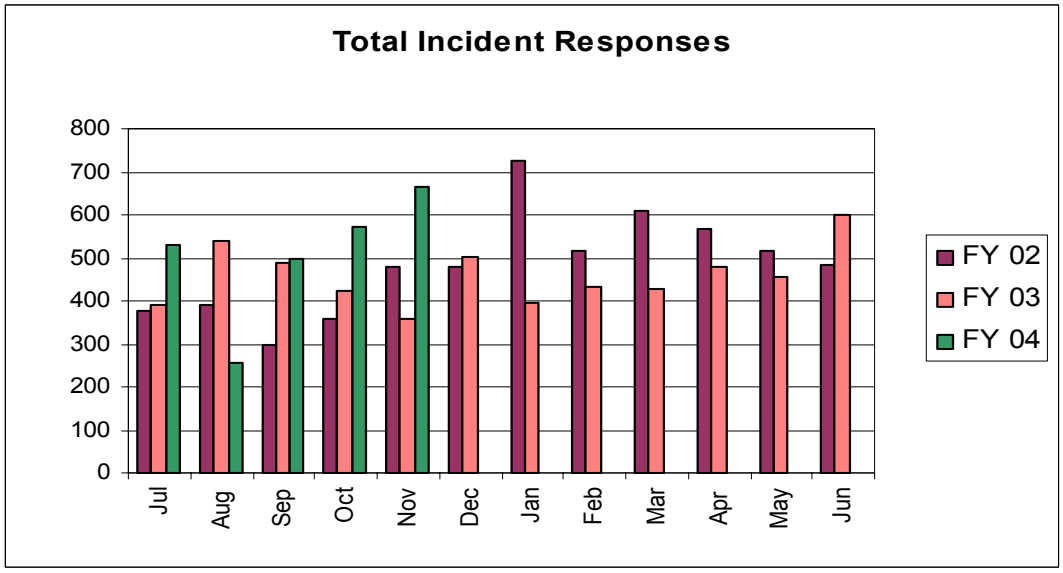
- The concept report to add cameras, video detection and fiber to US-191 in Moab has been submitted to UDOT and is awaiting final comments.

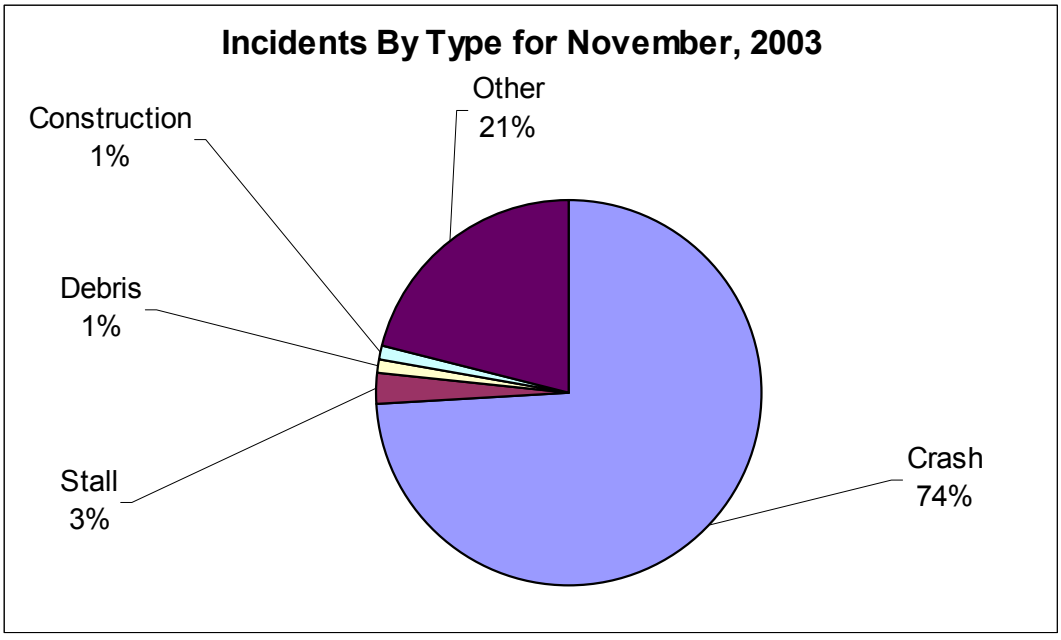
Acronyms

ATMS	Advanced Traffic Management System	TMS	Traffic Monitoring Station (count station)
CCTV	Closed Circuit Television	TOC	Traffic Operations Center
DPS	Department of Public Safety	TTI	Travel Time Index
HAR	Highway Advisory Radio	VMS	Variable Message Sign
RWIS	Road-Weather Information System		

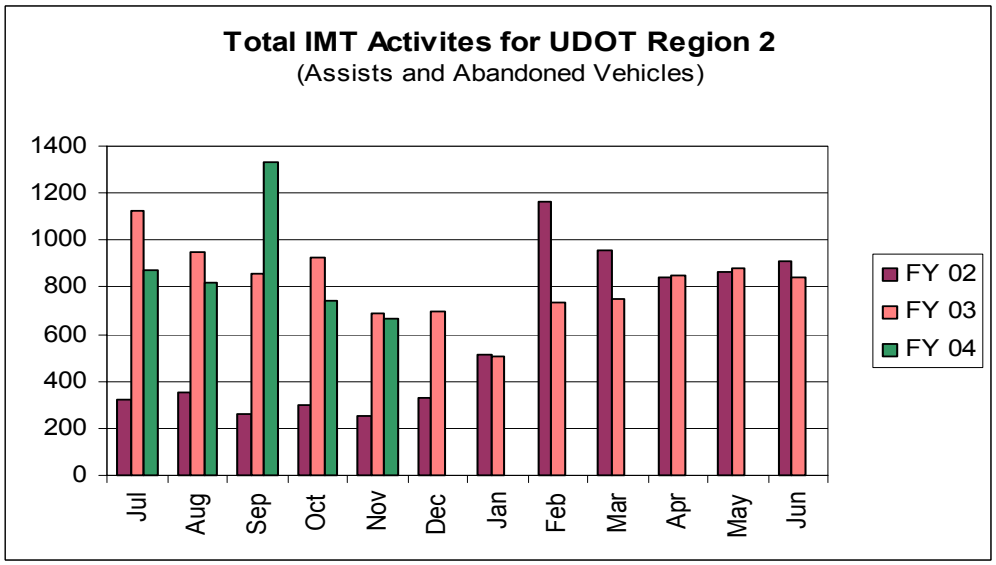
Safety

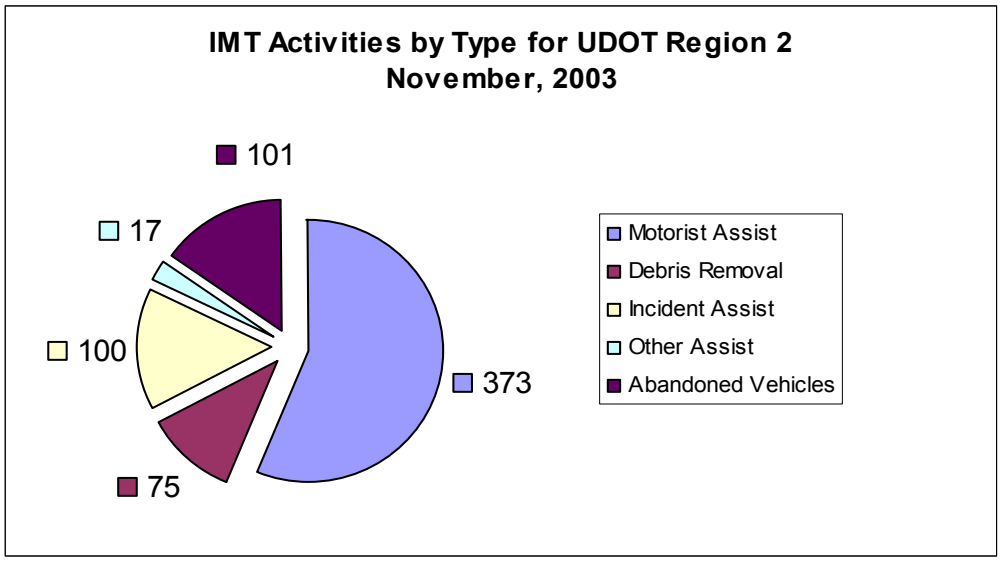
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts.





Region 2 Incident Management Team (IMT) Activities





Freeway Traffic Level of Service

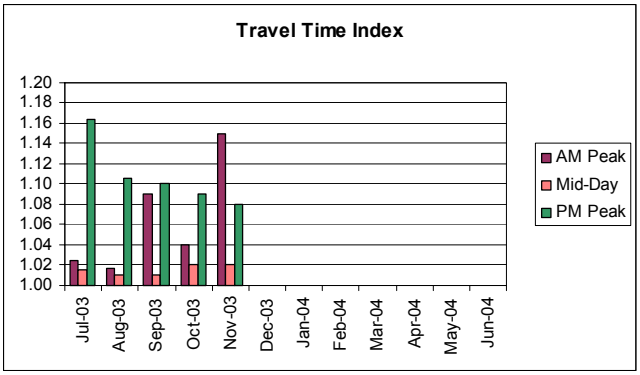
Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Salt Lake Valley. As more TMS sites are installed throughout the state, they will be included in these performance measures.

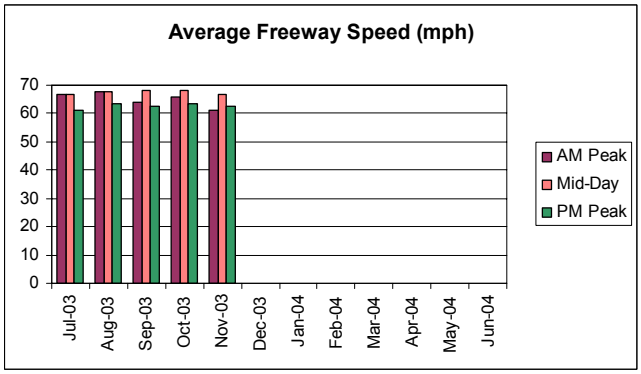
Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of one (1) represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

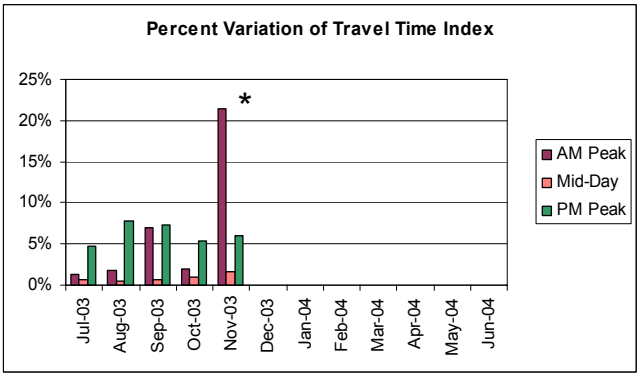
Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time index changes from day-to-day.

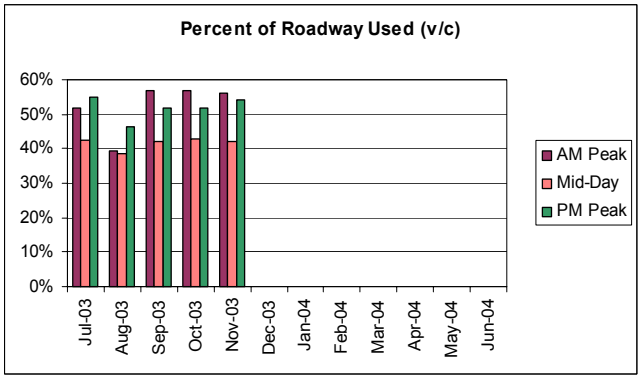
Average Freeway Speed: The Freeway Speed is weighted by volume.

Percent of Roadway Used: The percent of roadway used is the ratio of the volume on the segment to its capacity. This is otherwise known as the volume to capacity ratio, or (v/c).









The 5 links with the highest average Travel Time Index for the month are:

Segment	Period	Avg Of TTI
I-15 NB from Point-of-the-Mountain to 10600 S	AM Peak	1.84
I-15 NB from 600 N to I-215 W	PM Peak	1.45
I-15 NB from 600 S to 600 N	PM Peak	1.41
I-15 NB from 10600 S to I-215 S	PM Peak	1.36
SR-201 WB from I-15 to I-215 W	PM Peak	1.26

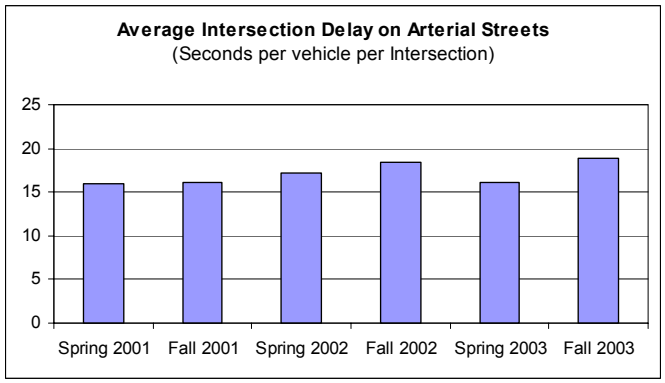
*

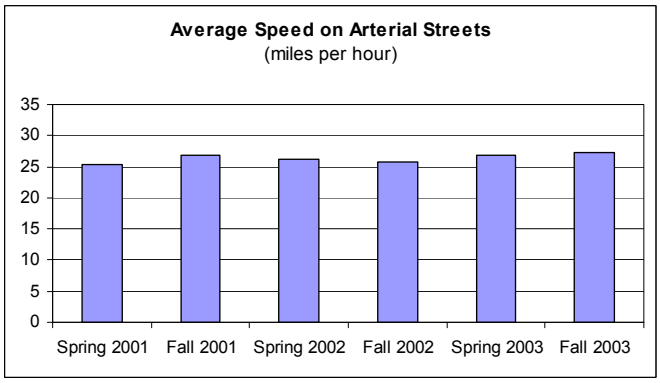
*The TTI and Percent Variation of the TTI for all segments was high due to the snowstorm during the AM Peak on November 26th, which reduced speeds to nearly ½ the normal speeds.

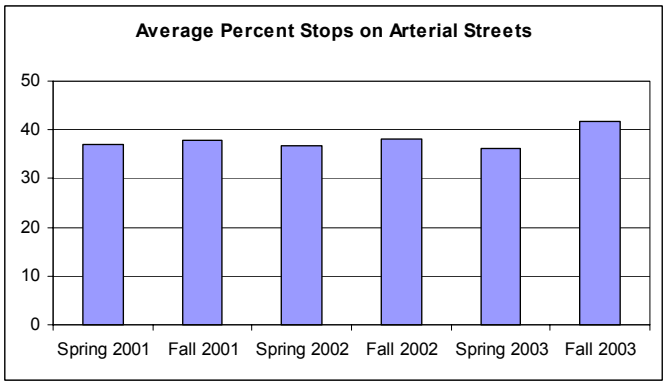
Surface Street Traffic Level of Service

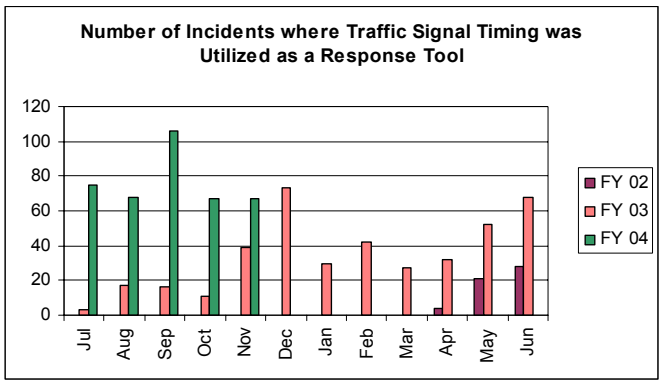
The surface street traffic statistics are generated through a series of Travel Time measurements. Much can be learned through several runs along a corridor, including the average travel time, the average percent of intersections at which a vehicle must stop, the average time stopped at an intersection, and the average speed. The Statewide Timing group gathers these measurements from Regions 1 through 4 twice each year. The chart in the lower right corner shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

Since the data is gathered semi-annually, each month this report will provide charts for a region compared to the statewide average. The charts below represent the semi-annual statewide averages up to fall of 2003.

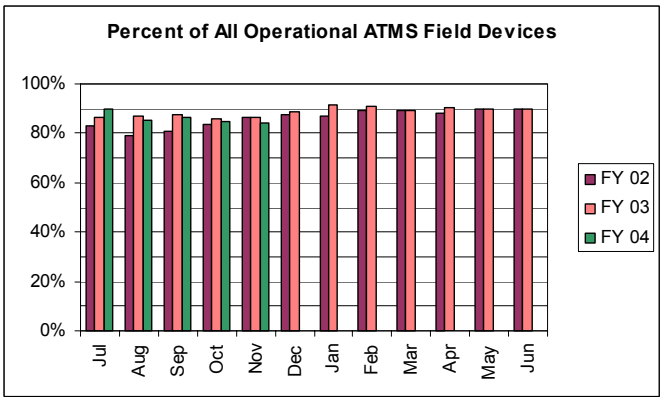


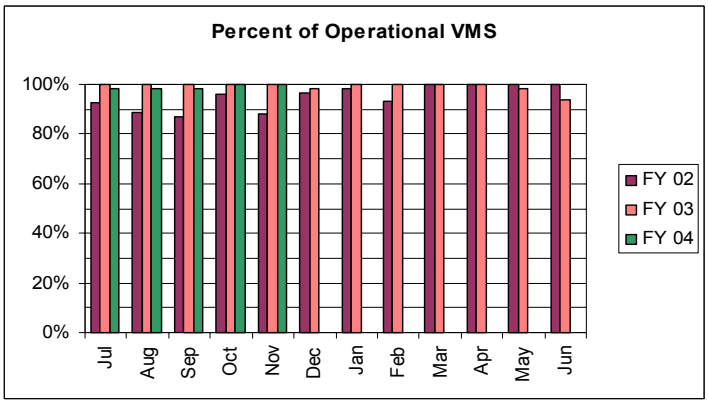


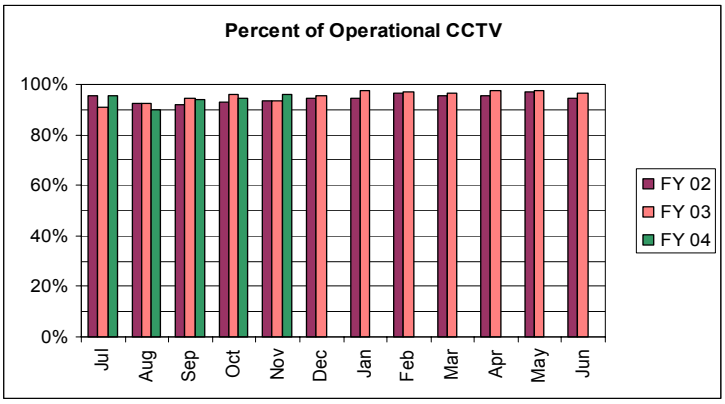


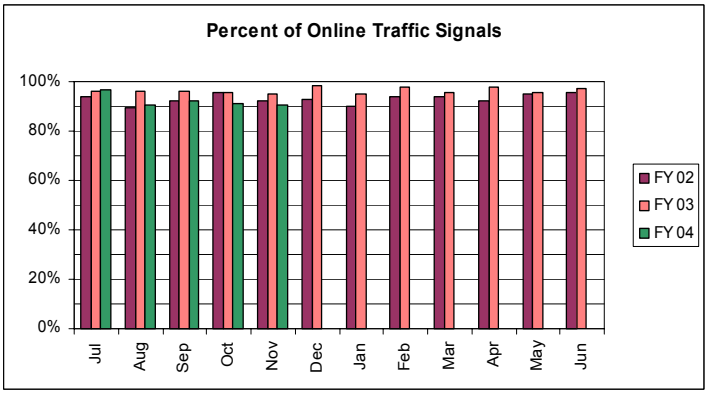


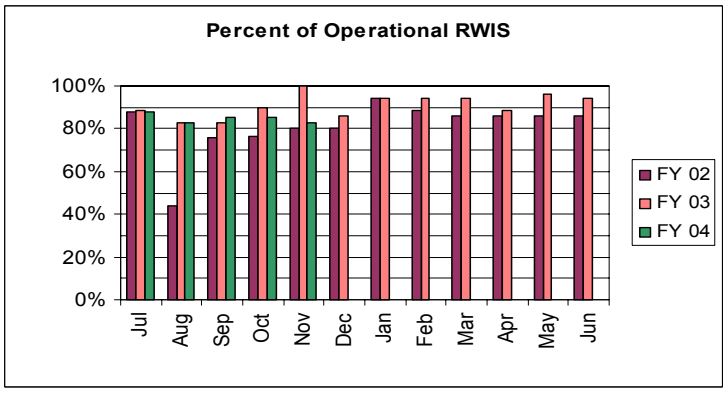
Maintenance

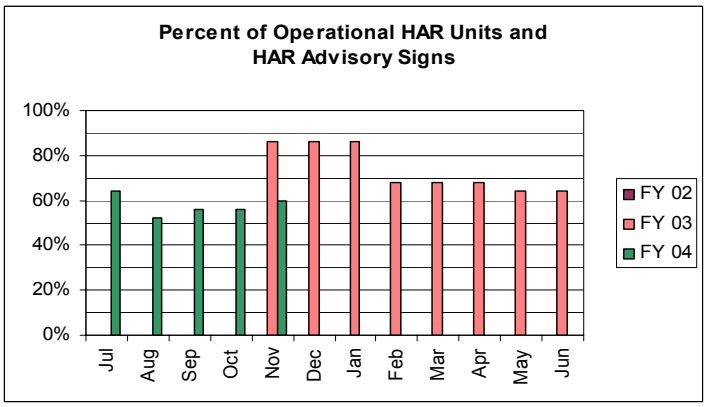


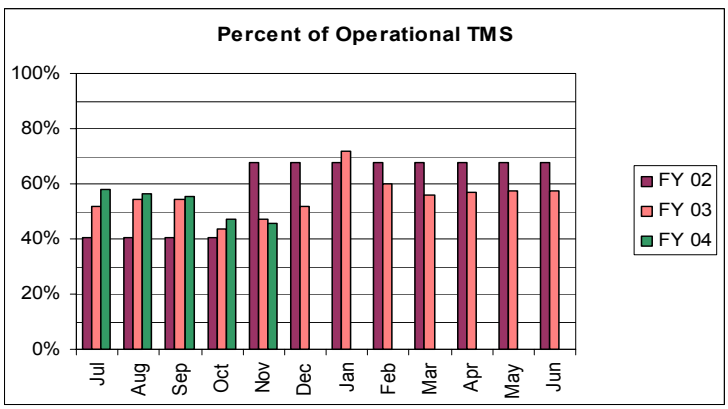




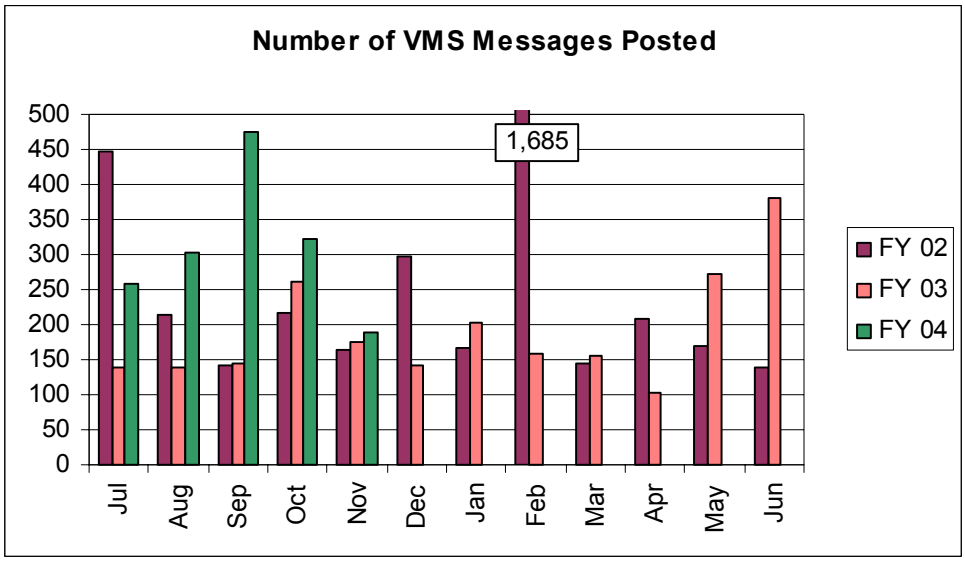


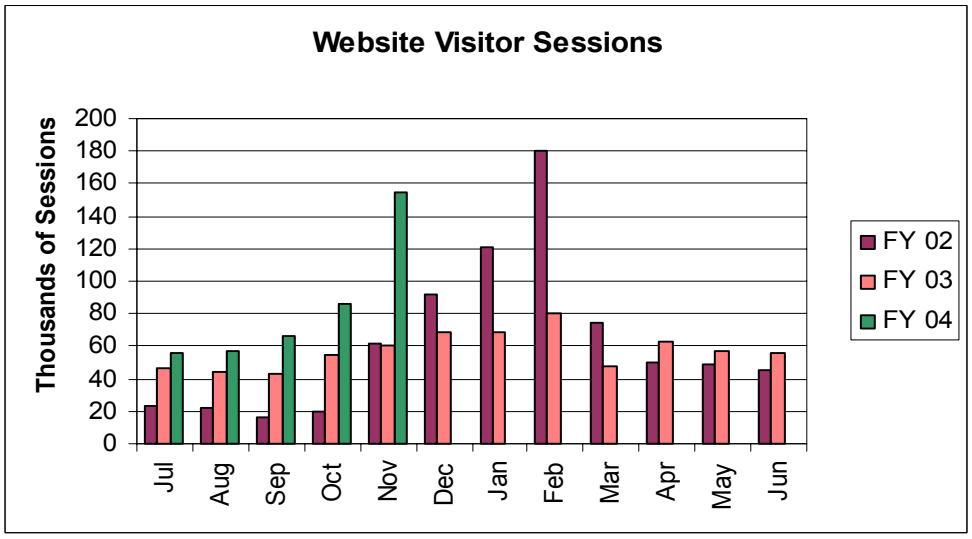


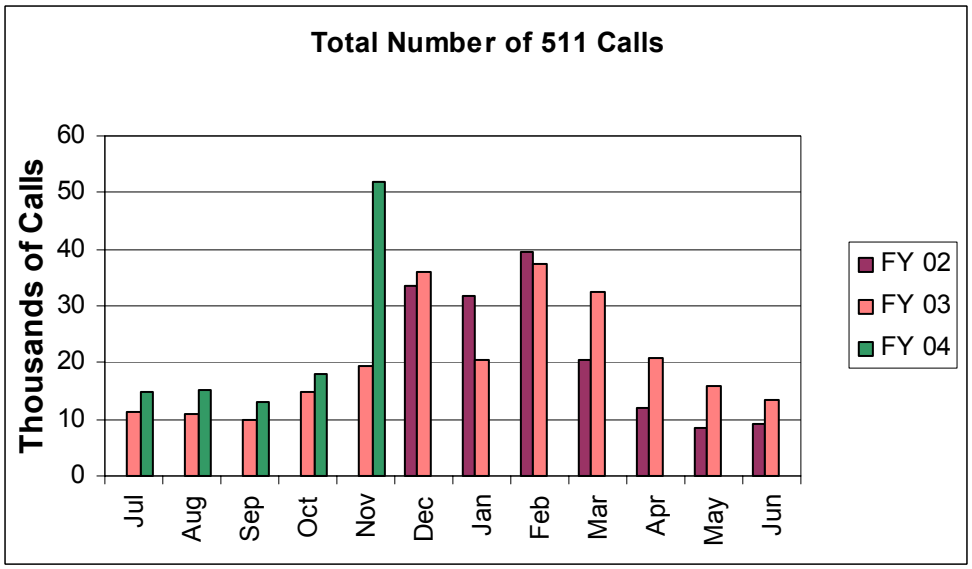




Traveler Information







Customer Service